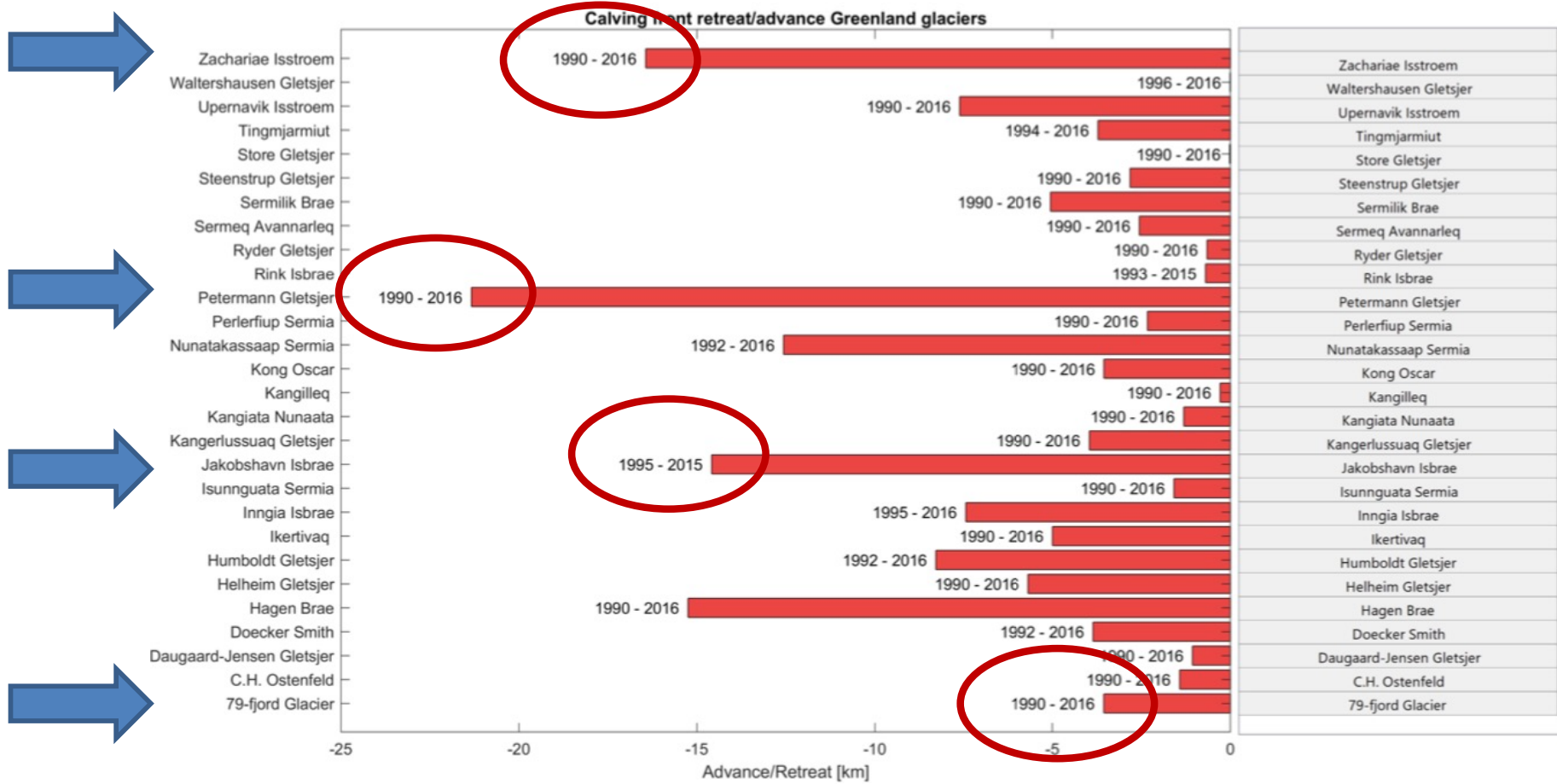


Greenland Glacier Retreat



From Mottam et al. (2019)

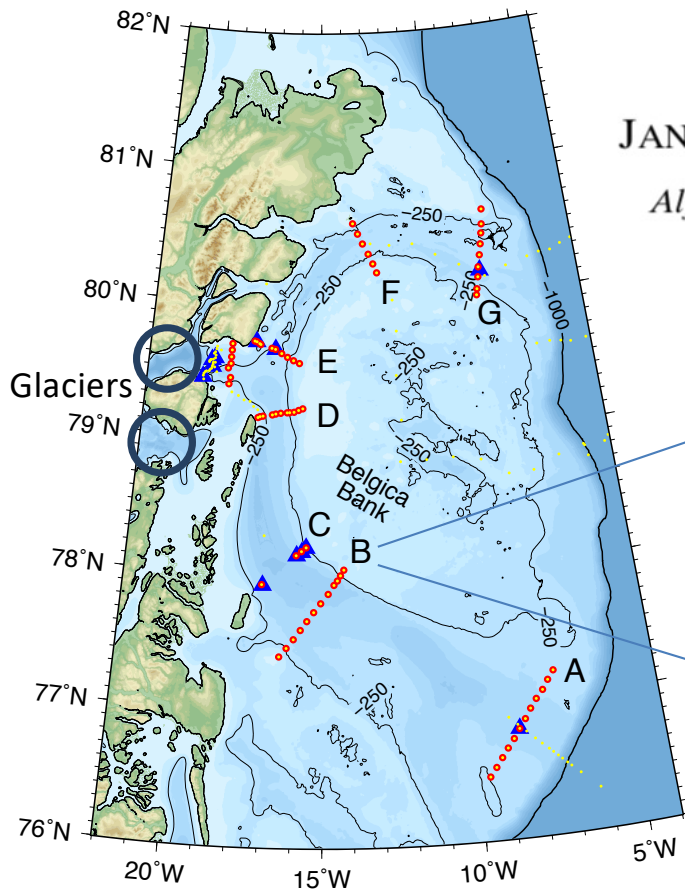
Ocean Circulation Connecting Fram Strait to Glaciers off Northeast Greenland: Mean Flows, Topographic Rossby Waves, and Their Forcing

ANDREAS MÜNCHOW

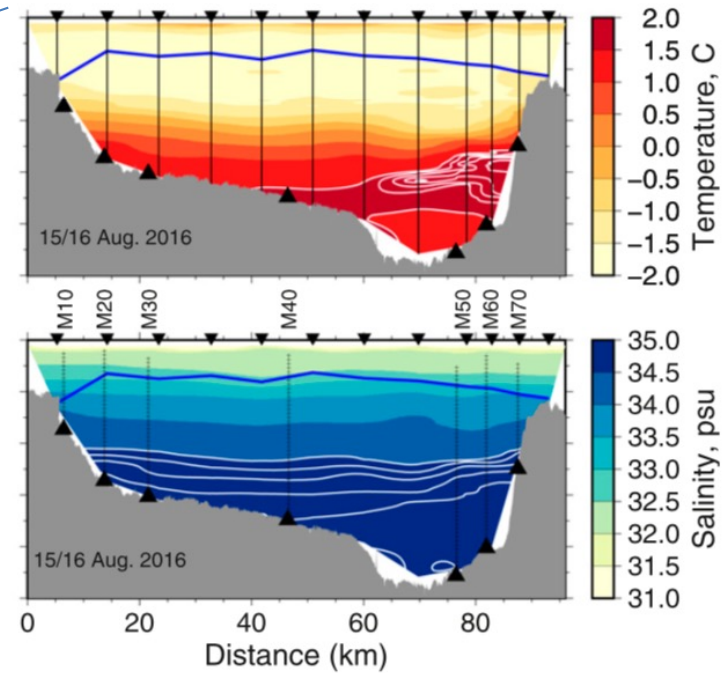
University of Delaware, Newark, Delaware

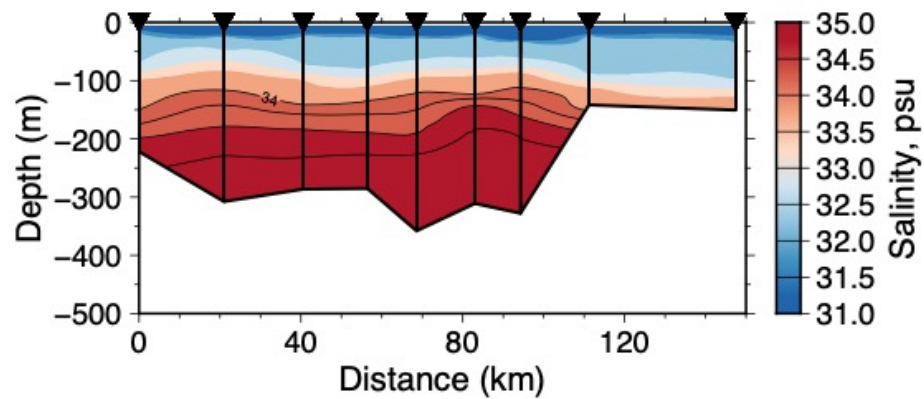
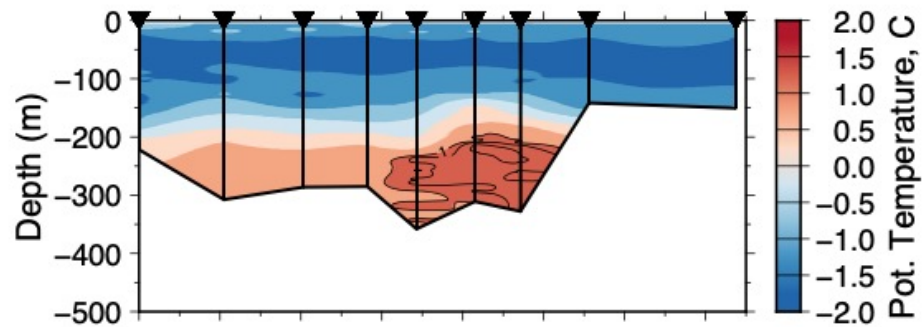
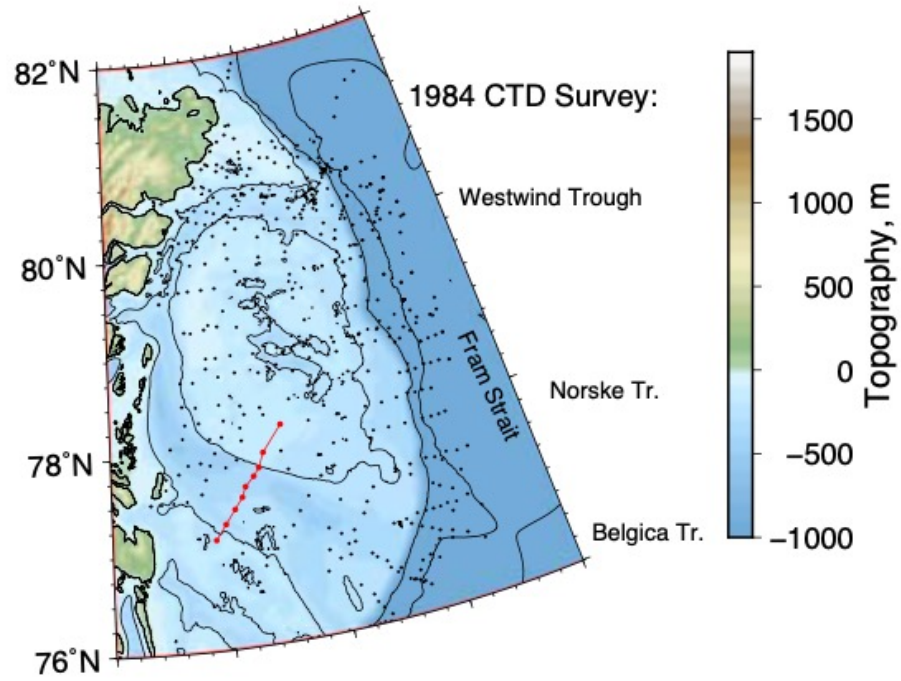
JANIN SCHAFFER AND TORSTEN KANZOW

Alfred Wegener Institute, Bremerhaven, Germany

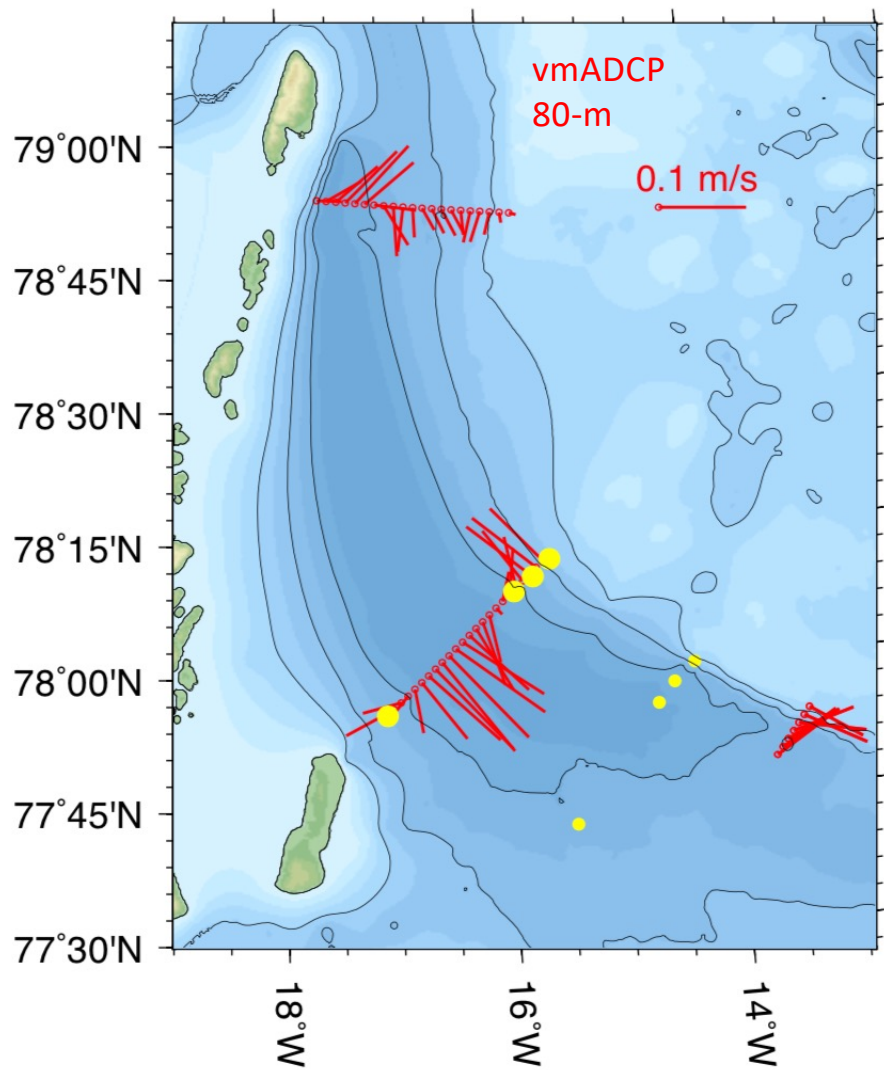


Moorings
CTD/ADCP Surveys

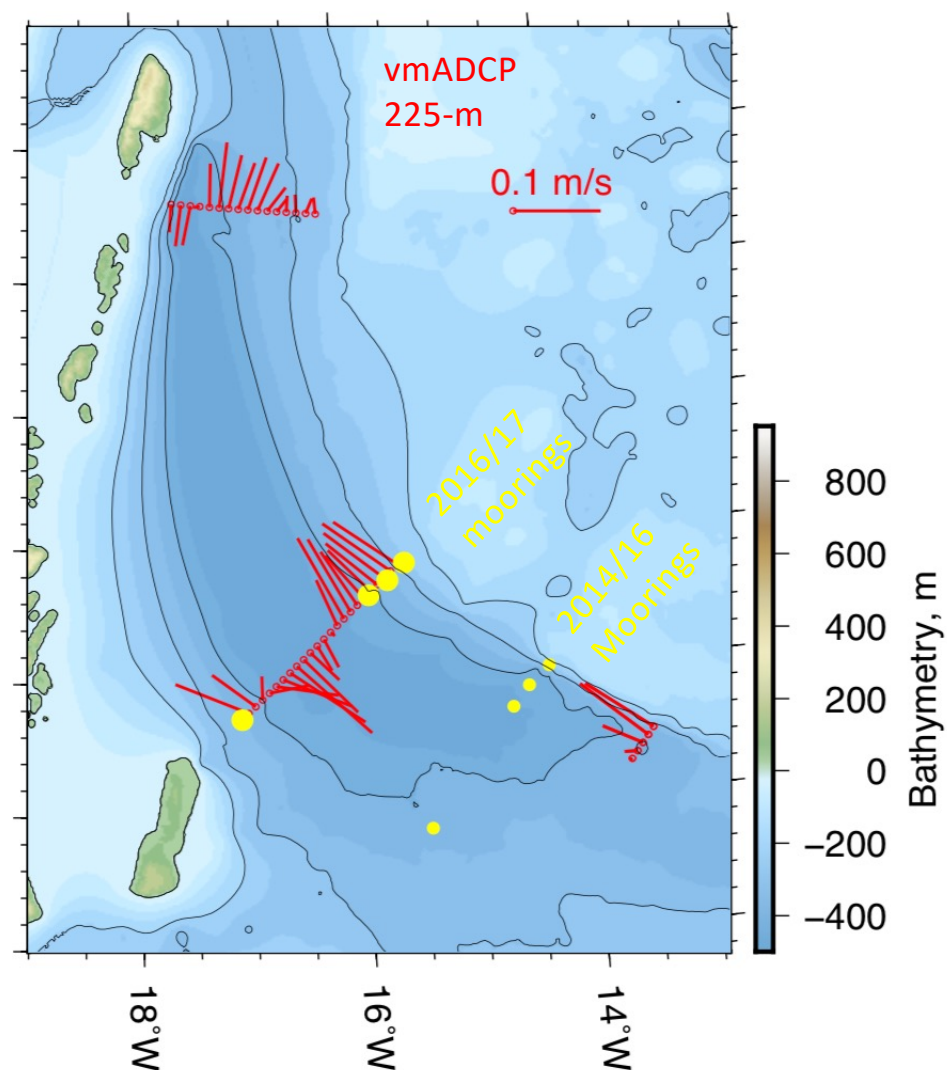




Near Surface flow

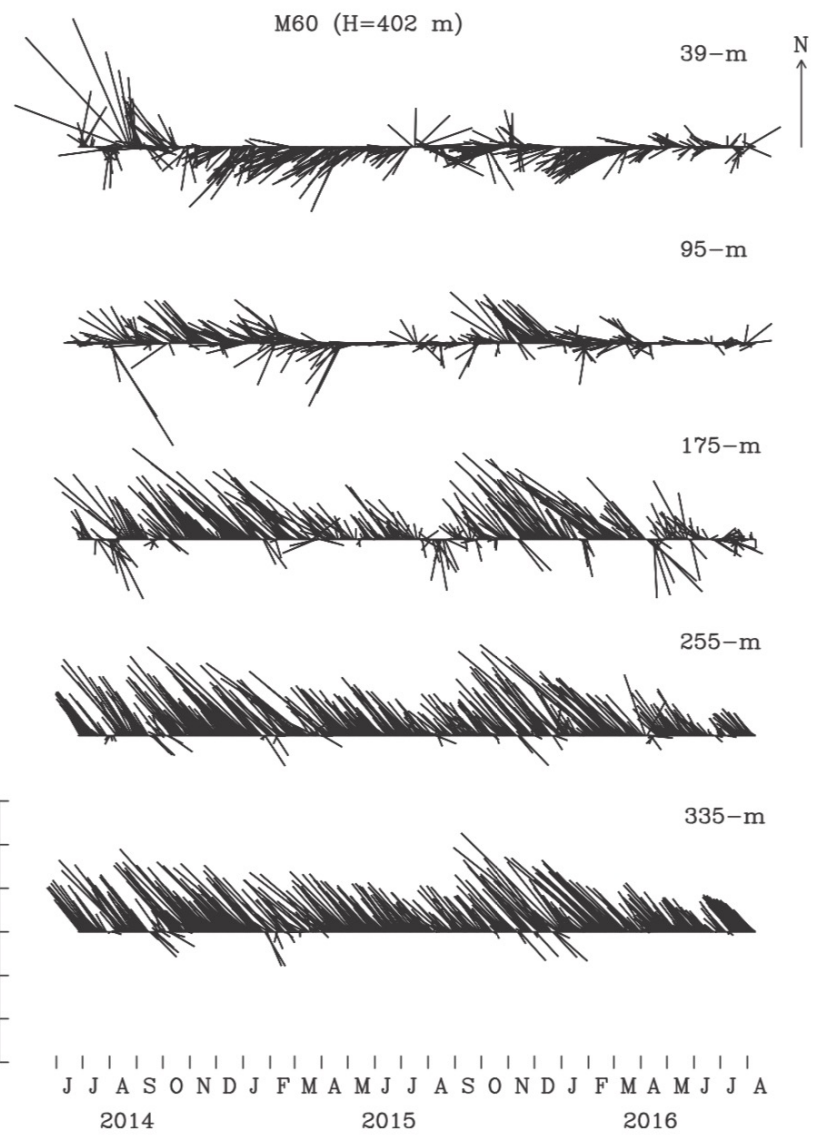
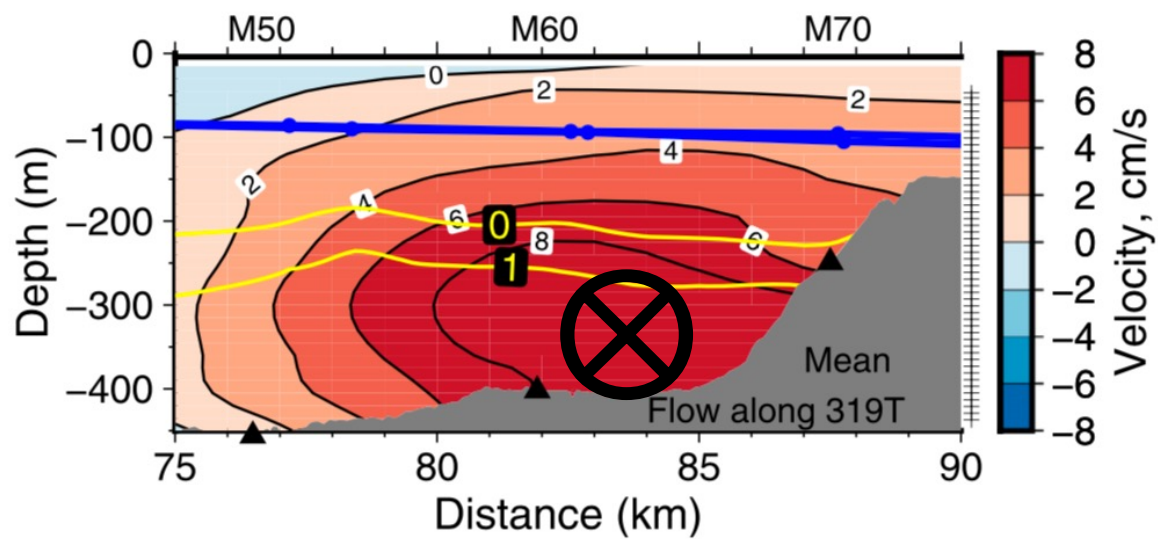


Near Bottom flow

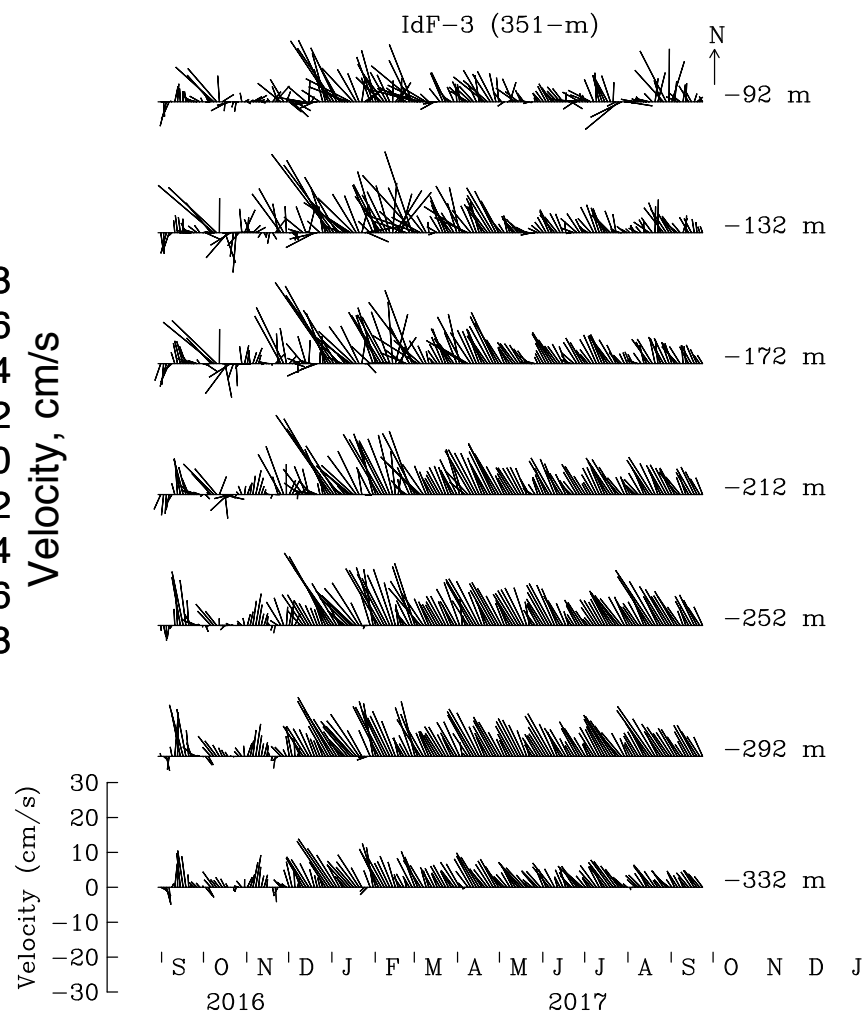
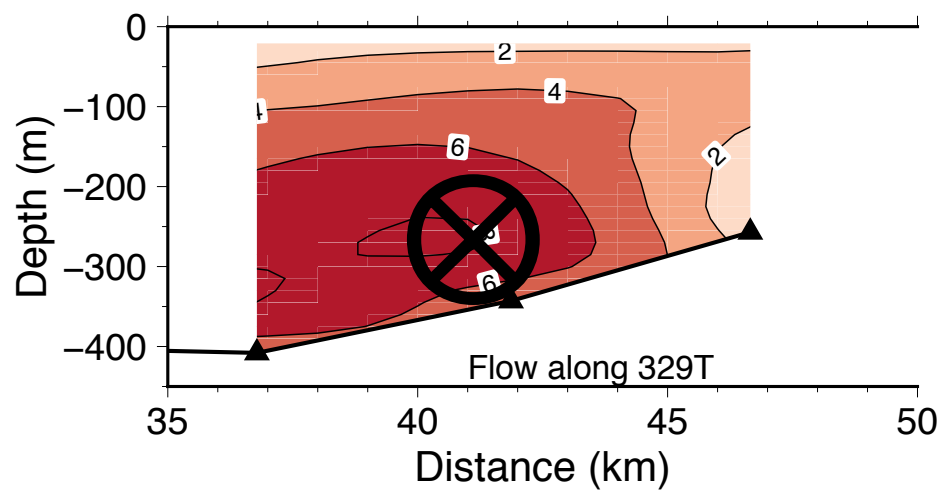


Oct.-2017

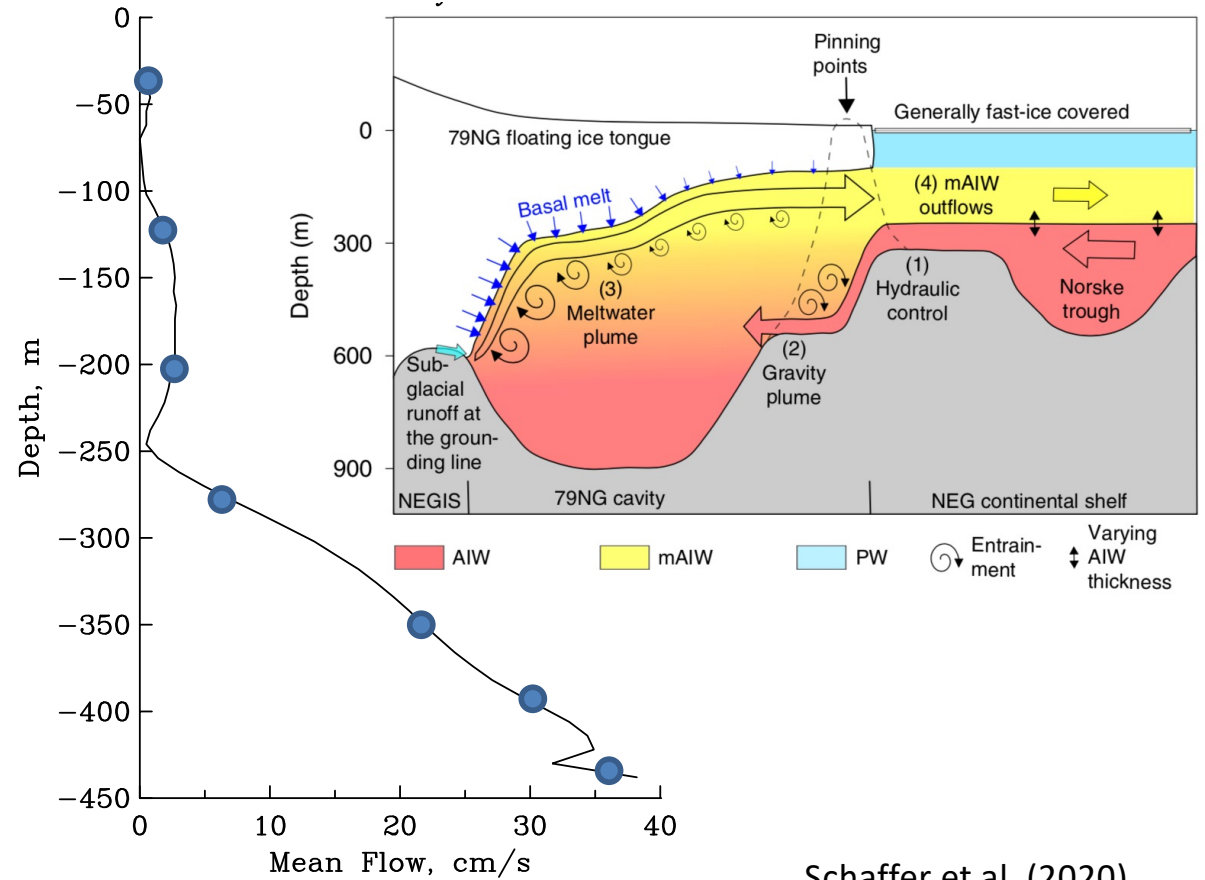
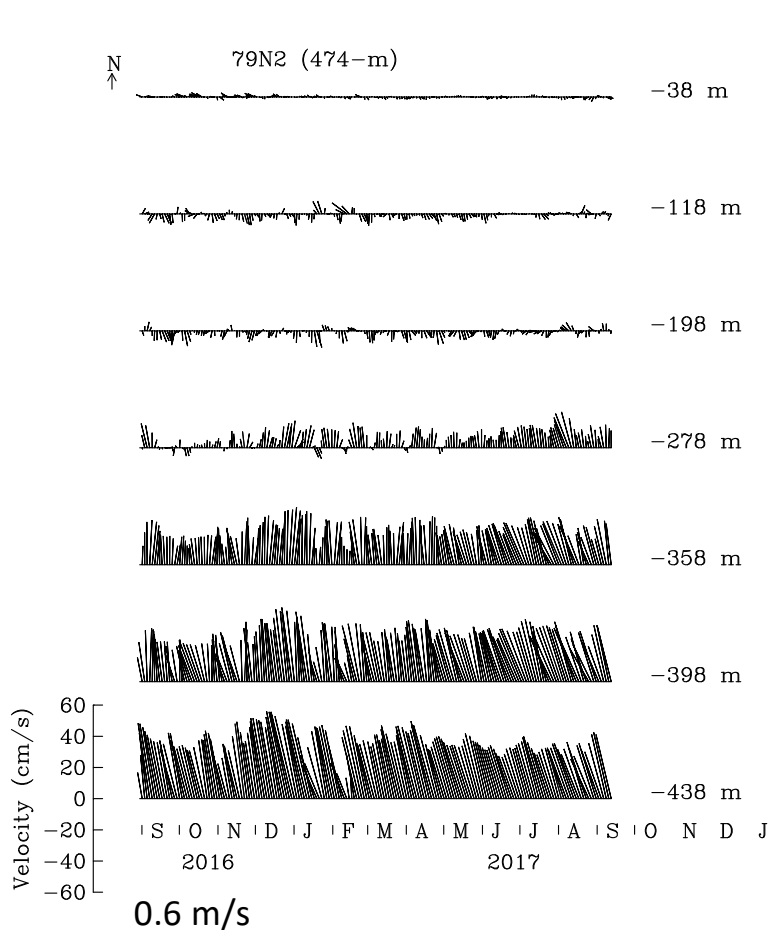
2014-16 Mean Flow



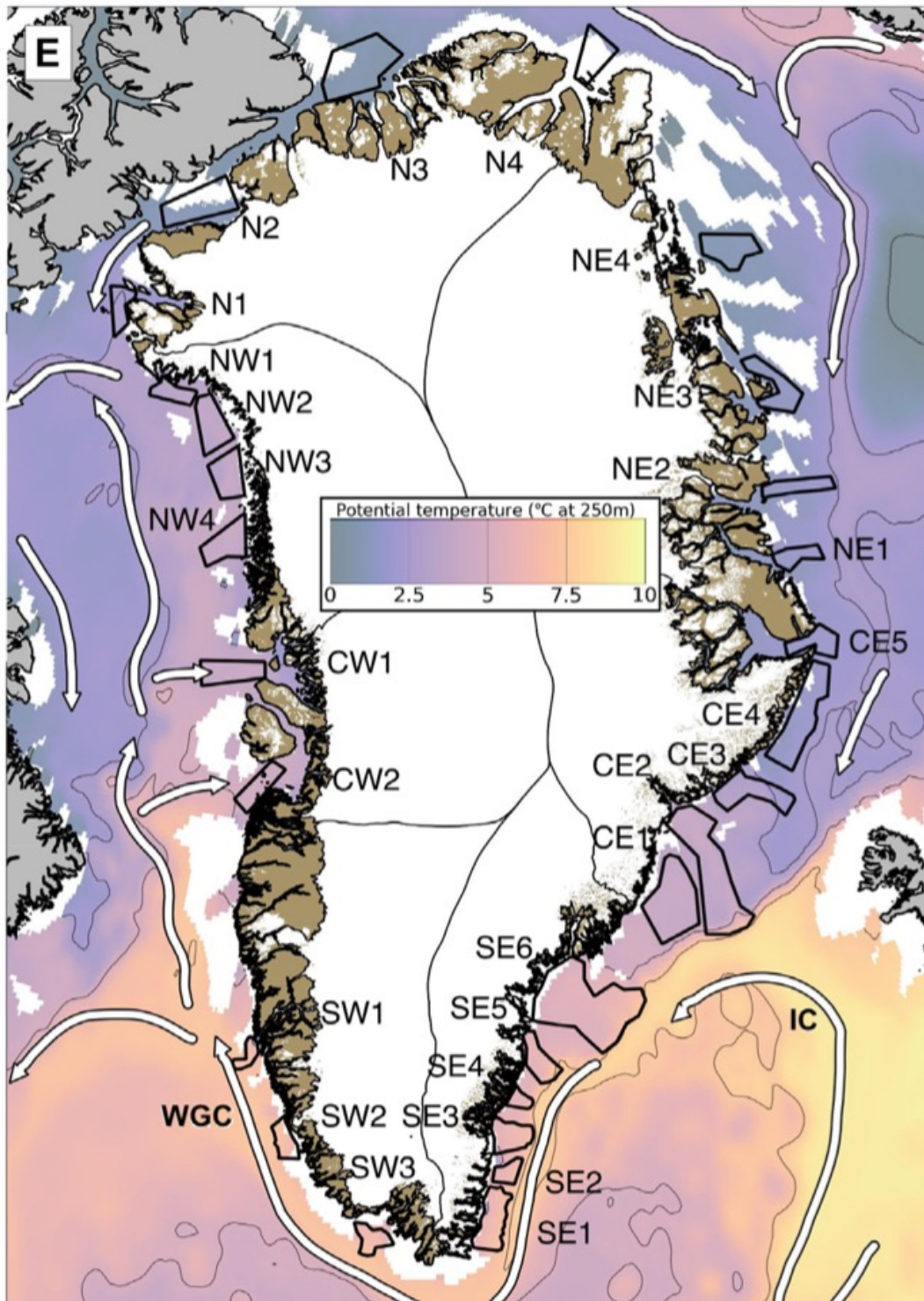
2016-17 Mean Flow



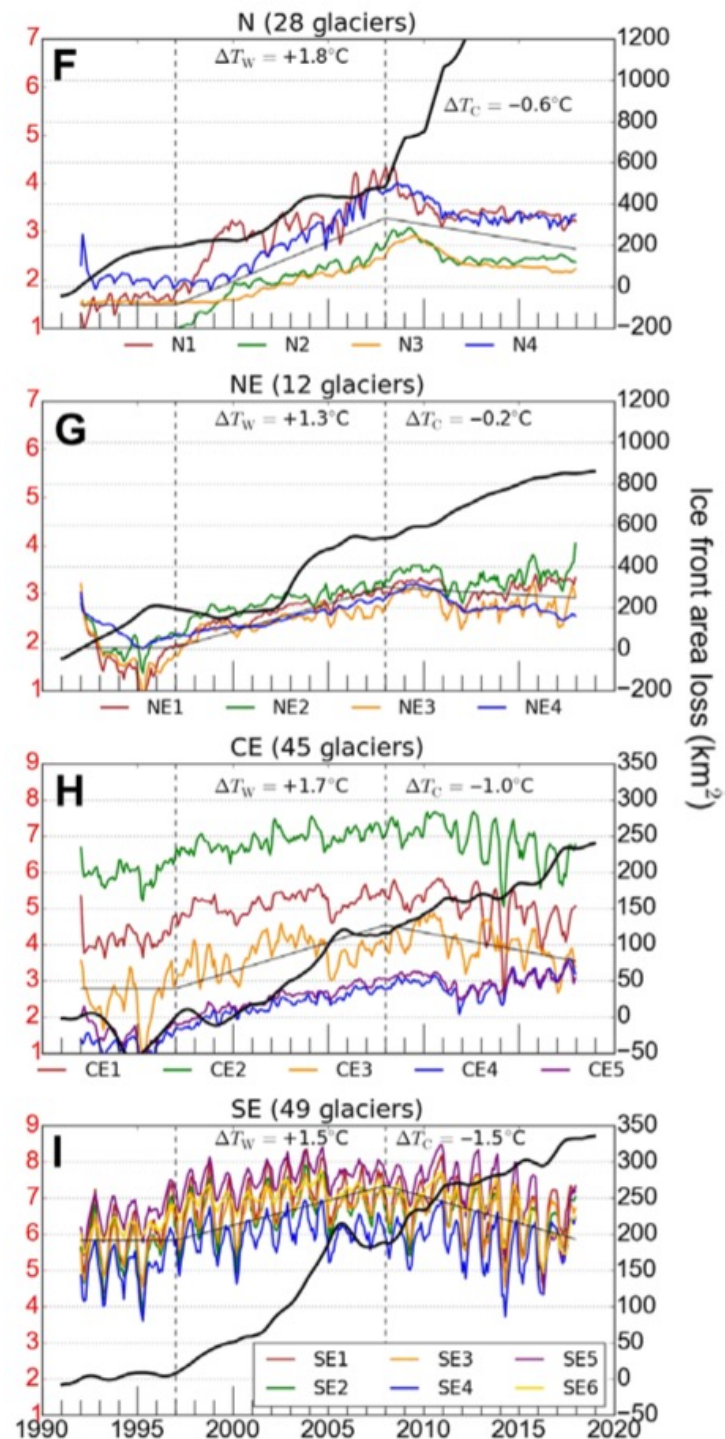
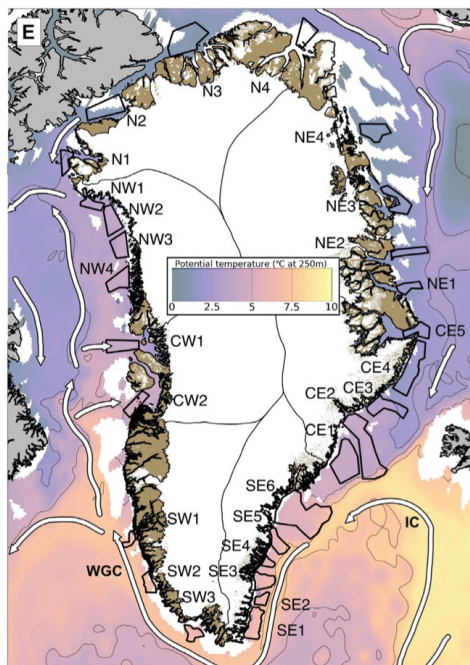
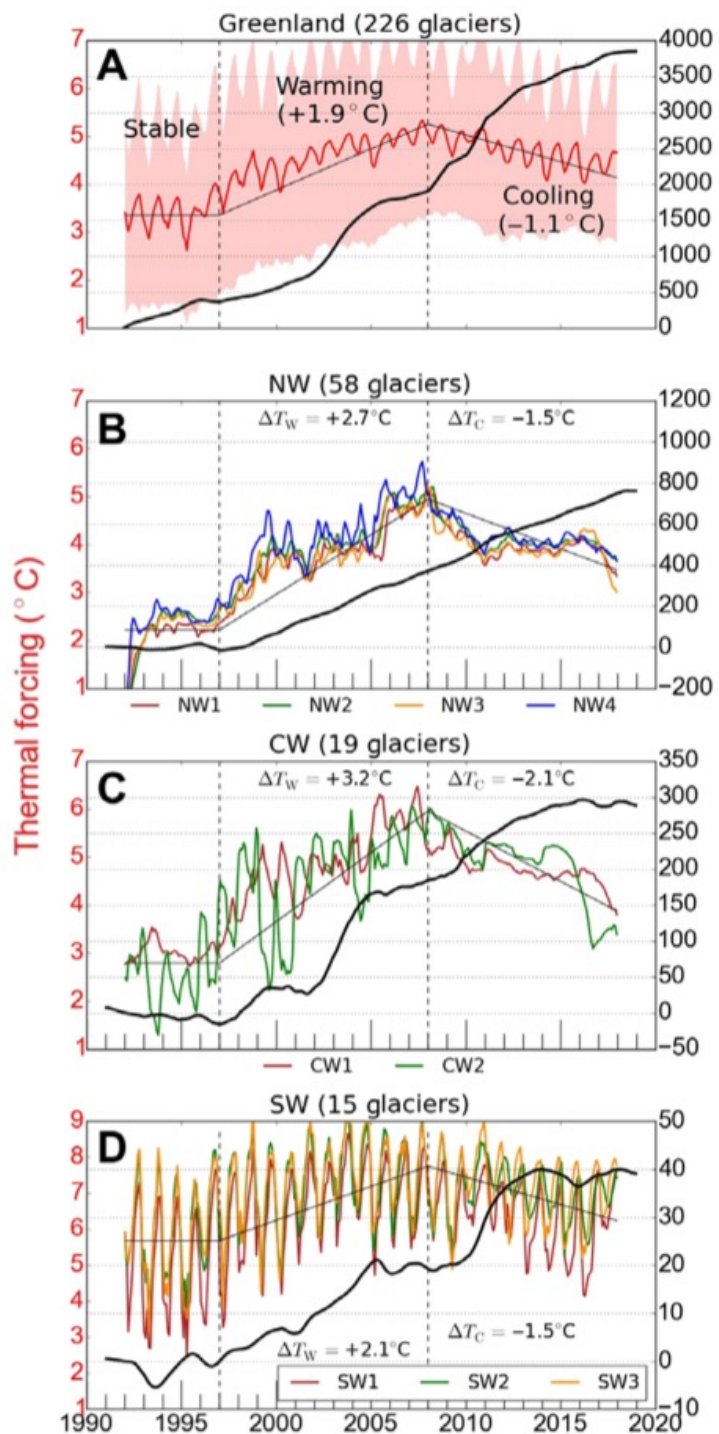
Motivation: Flow of warm Atlantic waters into the glacier cavity



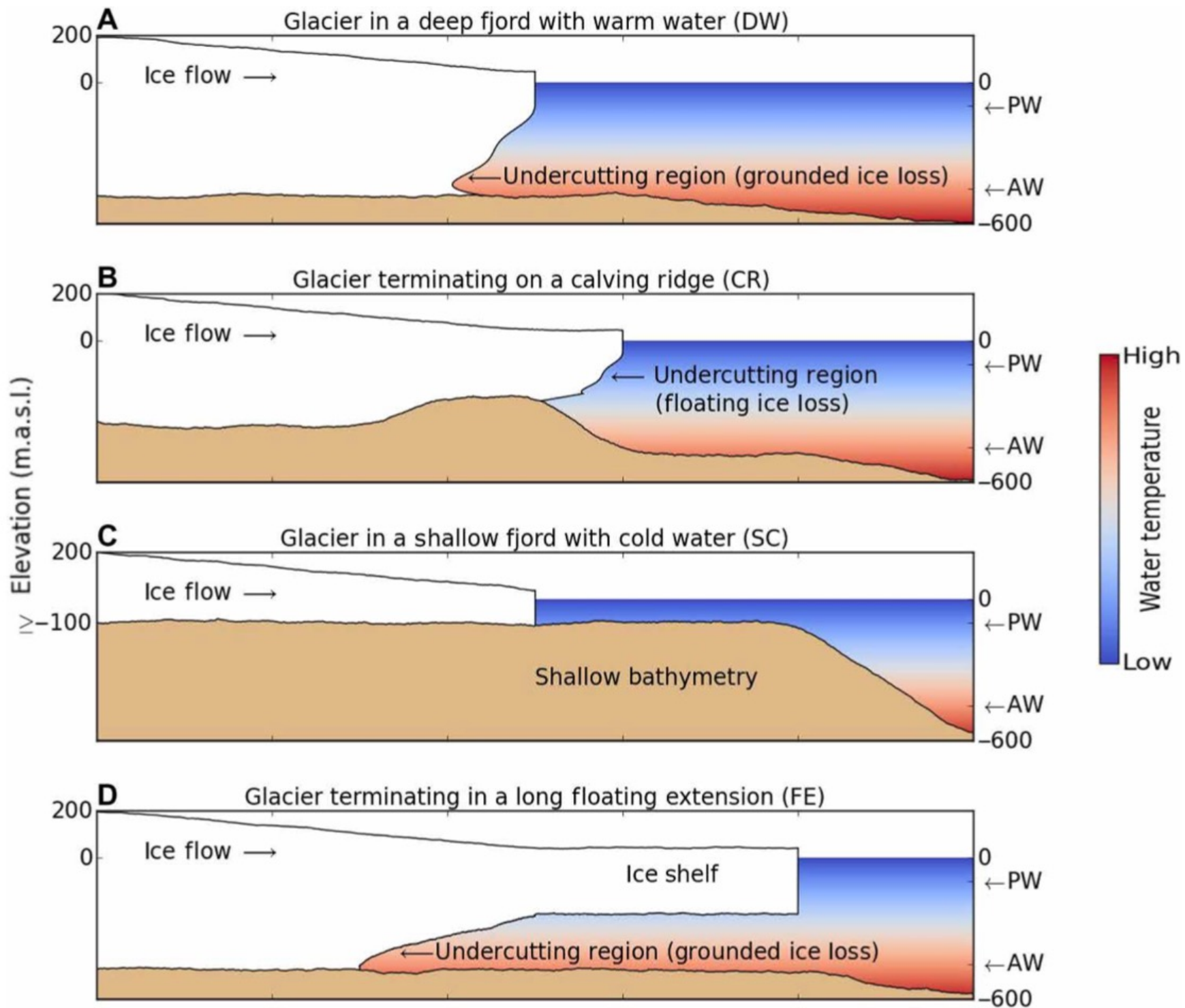
Schaffer et al. (2020)
von Albedyll et al. (2021)

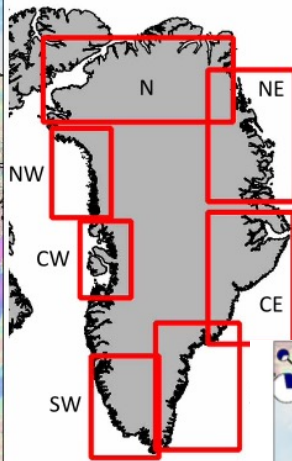
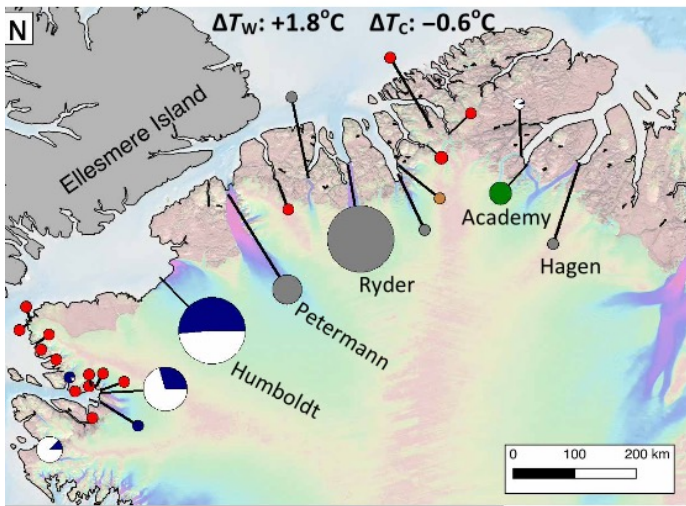


Wood et al. (2021)

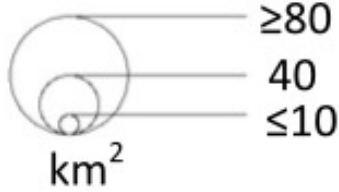


Wood et al. (2021)

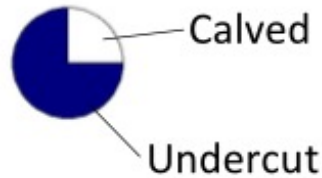




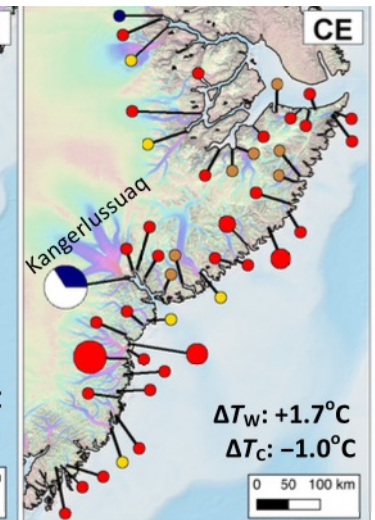
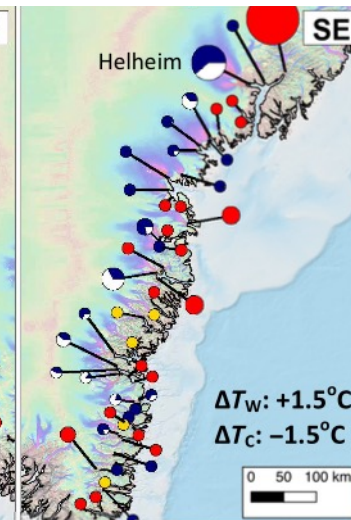
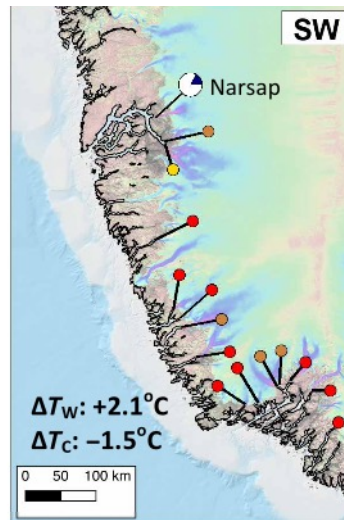
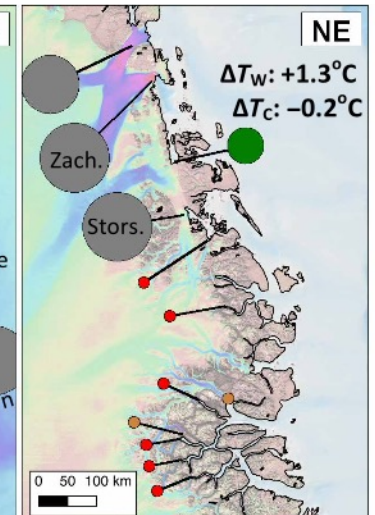
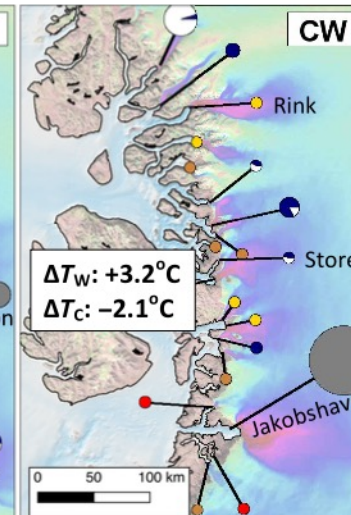
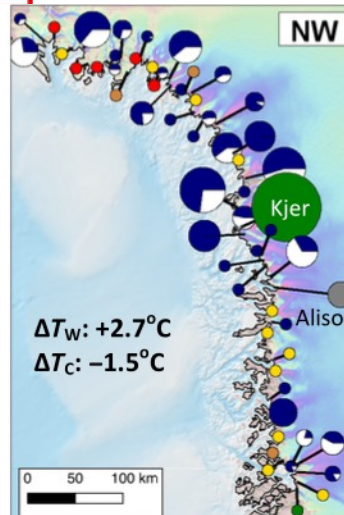
Retreat area 1992–2018

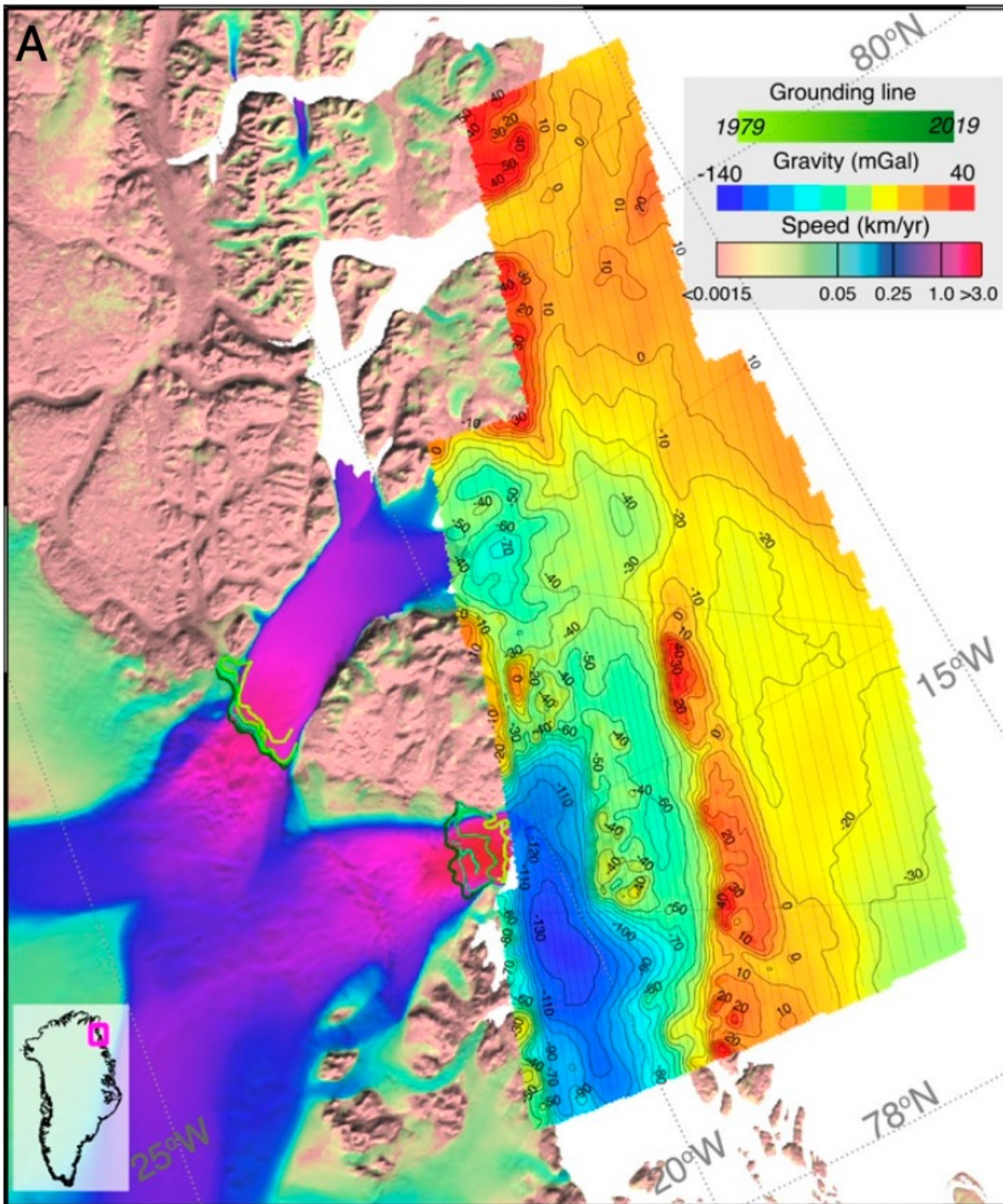


Deep, warm glaciers (DW)



- Calving on ridge (CR)
- Shallow, cold glaciers (SC)
- Floating extension (FE)
- Sustained retreat (SR)
- Noncategorized (NC)



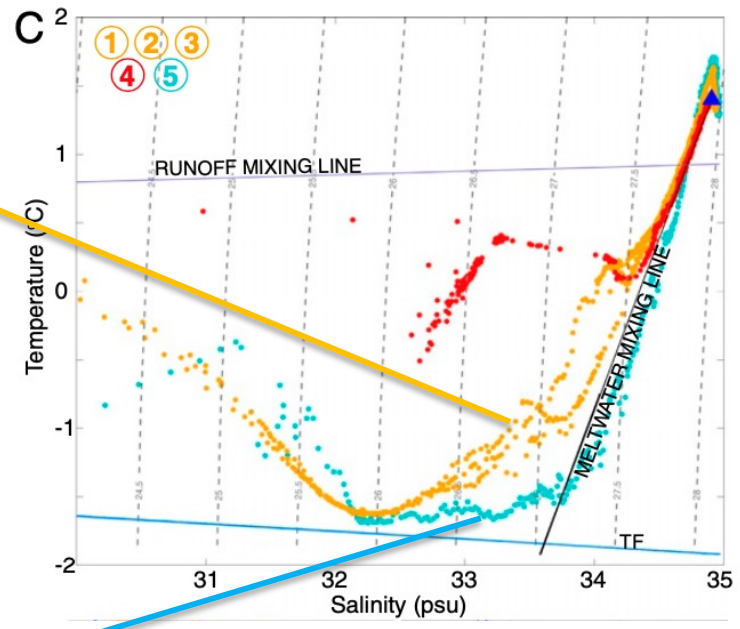
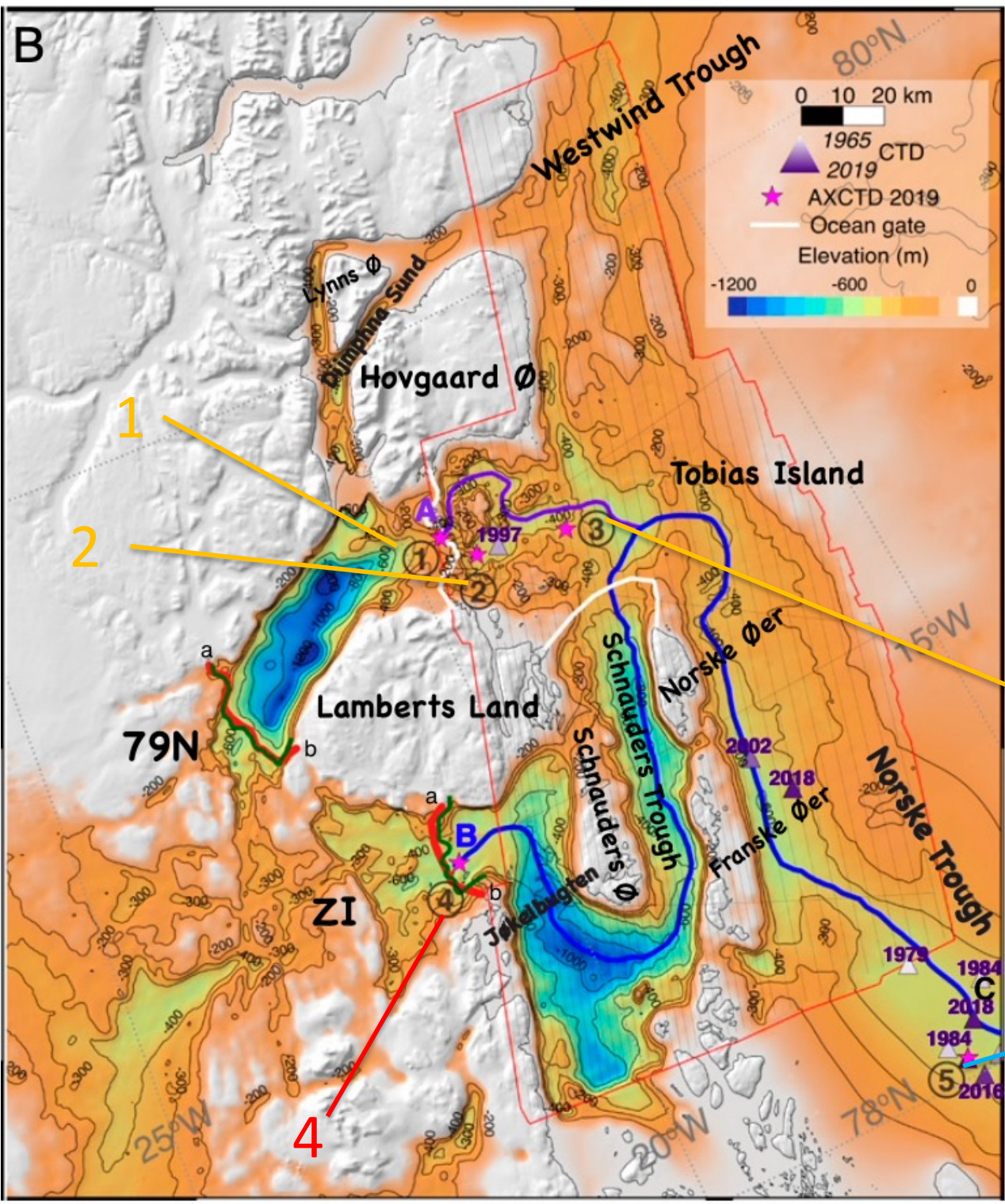


Nioghalvfjerdingsfjorden
(79N Glacier):

Ice-shelf intact

Zachariae Gl.:

Ice-shelf collapsed
2014



An et al. (2021)

